

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018878**Date Inspected:** 25-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC)**Location:** Shanghai, China**CWI Name:** Li Yang and Zhu Zhong Hai**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 11DW (Truss Post and Road Barrier Brackets)

This QA Inspector witnessed the final bolt tension verification on bolts installed at Corner Assembly connecting the Road Barrier Brackets, Inclined Truss Post and Vertical Truss Post at Counter Weight side and Cross Beam side between Panel Points (PP) 103.5 to PP 104; PP 104 to PP 105 and PP 105 to PP 106 for Segment 11DW. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00579 dated December 25, 2010.

The bolt sizes used were M22 x 55 RC Lot # DHGM220044 and the final torque value established was 473 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220121 and the final torque value established was 393 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220054 and the final torque value established was 497 N-m.

WELDING INSPECTION REPORT

(Continued Page 2 of 5)

The bolt sizes used were M24 x 60 RC Lot # DHGM240014 and the final torque value established was 567 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240013 and the final torque value established was 540 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

Please reference the pictures attached for more comprehensive details.

Segment 11EW (Truss Post and Road Barrier Brackets)

This QA Inspector witnessed the final bolt tension verification on bolts installed at Corner Assembly connecting the Road Barrier Brackets, Inclined Truss Post and Vertical Truss Post at Counter Weight side and Cross Beam side between Panel Points (PP) 106 to PP 107; PP 107 to PP 108 and PP 108 to PP 108.75 for Segment 11EW. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00579 dated December 25, 2010.

The bolt sizes used were M22 x 55 RC Lot # DHGM220044 and the final torque value established was 473 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220121 and the final torque value established was 393 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220054 and the final torque value established was 497 N-m.

The bolt sizes used were M24 x 60 RC Lot # DHGM240014 and the final torque value established was 567 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240013 and the final torque value established was 540 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

Please reference the pictures attached for more comprehensive details.

Segment 11BW (Retro-fit Plates)

This QA Inspector witnessed final bolt tension verification on bolts connecting Bottom Panel T-Rib connection plates to Floor Beam at first Bottom Panel T-Rib Cross Beam Side (from work point W4) and Counter Weight side (from work point W3) at Panel Points (PP) 99 to PP 100 for Segment 11BW. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00579 Dated December 25, 2010.

The bolt sizes used were M22 x 80 RC Lot # DHGM220094 and the final torque value established was 470 N-m.

WELDING INSPECTION REPORT

(Continued Page 3 of 5)

The Manual Torque wrench used was Serial No. XO2-666.

Segment 11DW (Retro-fit Plates)

This QA Inspector witnessed final bolt tension verification on bolts connecting Bottom Panel T-Rib connection plates to Floor Beam at first Bottom Panel T-Rib Cross Beam Side (from work point W4) and Counter Weight side (from work point W3) at Panel Points (PP) 104 to PP 105 for Segment 11DW. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00579 Dated December 25, 2010.

The bolt sizes used were M22 x 80 RC Lot # DHGM220094 and the final torque value established was 470 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

Bike Path Cantilever Support (at OBG Trail Assembly)

This QA Inspector performed Dimension Inspection to check and measure various items of the Bike Path Cantilever support at Orthotropic Box Girder (OBG) and the following items were inspected.

Bike Path type identified as BK1A.

1. Overall length of support (end of cantilever to edge panel contact flange) at east and west side.
2. Distance from end of cantilever to nearest anchor bolt at east and west side.
3. Longitudinal center to center spacing between anchor bolts at east and west side
4. Transverse center to center spacing between anchor bolts at east and west side.

The inspected Bike Path supports identified as below.

BK001-048 at PP 95 for Segment 11AE
BK001-049 at PP 97 for Segment 11AE
BK001-050 at PP 99 for Segment 11BE
BK001-003 at PP 101 for Segment 11CE

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 12AE to Segment 12BE (Deck Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as DP3011-001-042. The welder identification was 044515 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-3213-B-U3b. The piece mark was identified as Deck Panel I-Rib splice weld, third from the work point E2.

WELDING INSPECTION REPORT

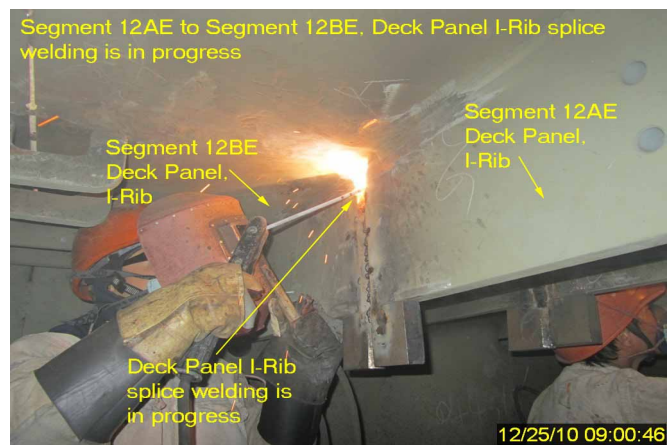
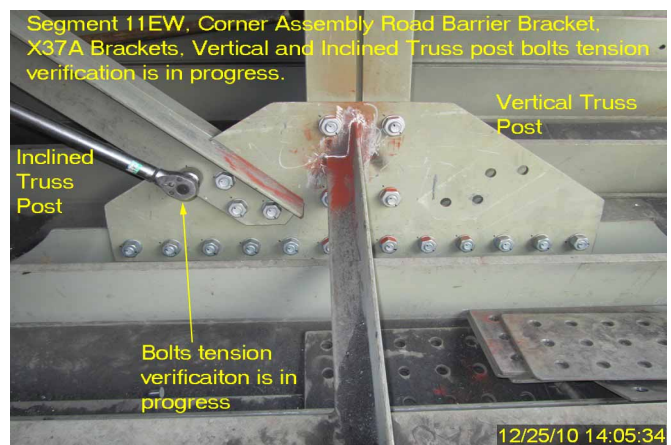
(Continued Page 4 of 5)

Please reference the pictures attached for more comprehensive details.

Segment 12AE (Deck Panel I-Rib Stiffeners)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as DP3001-001-022/023. The welder identification was 040378 and observed welding in the 4F (Overhead) position using approved Welding Procedure Specification WPS-B-T-4114-1. The piece mark was identified as Deck Panel I-Rib hold back weld, third from the work point E5.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 5 of 5)

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Dsouza,Christopher	QA Reviewer
